Gill Tremlett

EXPANDED PROGRAMME ON IMMUNIZATION

TRAINING COURSE ON PLANNING AND MANAGEMENT

GILL TREMLETT

Regional Priorities

WORLD HEALTH ORGANIZATION

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REGIONAL PRIORITIES

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REGIONAL PRIORITIES

INTRODUCTION

An essential step in planning a successful immunization programme is to establish regional priorities among the diseases preventable by immunization. Knowing the priority diseases in a region will enable an immunization programme manager to focus programme efforts where they promise to have the greatest impact on reducing morbidity and mortality. The procedure for establishing regional priorities involves 3 major steps:

- Assess importance of each disease.
- Assess likelihood of success with each disease.
- Combine assessments to establish priorities.

STATEMENT OF PURPOSE

In this module, you will determine priority assessments for the diseases preventable by immunization based on the importance of, and the likelihood of success with, each disease in each region of Fictitia. The skills that you practice in this module should prepare you to determine regional priorities among the diseases preventable by immunization for your country.

USING THIS MODULE

The format of this module differs from the format of other modules in this course. In this module, you are not given both guidelines for establishing regional priorities and a separate practice exercise in which you must perform this step using data on Fictitia. Instead, you are given only an exercise. By working through this exercise to determine Fictitia's regional priorities for immunization, you will learn a procedure which can be used to perform this step for any country.

Exercise

- Read and follow the instructions carefully.
- Write your answers in the spaces provided.
- If you have any questions about the exercise, consult with a Course Facilitator.

1.0 ASSESS IMPORTANCE OF EACH DISEASE.

This step will use primarily mortality, disability, and morbidity data to assess the diseases preventable by immunization in terms of their importance in each region in Fictitia. Fold out Worksheet A, page 13b, and look at it carefully. The diseases preventable by immunization are listed for you on Worksheet A in the first column. Notice also that the tables on pages 12 and 13a provide morbidity and mortality data for these diseases in Fictitia. Use this worksheet and the following procedure to assess the relative importance of each disease in each region of Fictitia. When you need data, refer to the tables on pages 12 and 13a in this module, and to the description of Fictitia in the module titled Introduction ("Leading Causes of Morbidity and Mortality").

1.1 Assess Mortality

Examine the annual mortality rate of each disease listed on Worksheet A for each region of Fictitia. Determine if the mortality rate of each listed disease in each region is of high, moderate, or low importance by comparing it with the mortality rates of other diseases in other regions. Record your answers on Worksheet A in the appropriate rows labeled "Mortality."

1.2 Assess Disability

Review information on the extent and duration of disability resulting from each disease preventable by immunization in each region. Determine if for each region the disability of each disease is relatively high, moderate, or low by comparing it with the disability of the other diseases. Record your answers on Worksheet A in the rows labeled "Disability." (Since a significant percent of those who get poliomyelitis and tuberculosis are disabled for long periods of time, the prevalence rate of these diseases should be counted here as disability.)

1.3 Assess Incidence

Examine the annual incidence rate of each disease listed on Worksheet A for each region. Determine if the incidence rate of each disease in each region is relatively high, moderate, or low. Record your answers on Worksheet A in the rows labeled "Incidence."

1.4 Assess Importance

- Examine the three answers you have recorded on Worksheet A for the first disease listed in each region. Use these answers to establish overall assessments of the relative importance of this disease in each region.

  The way in which you make these overall assessments is up to you. You may wish to average the 3 answers, or you may consider a certain criterion more important than the others and therefore wish to give it more weight. For example, if you have described a disease as having "high mortality," "moderate disability," and "moderate incidence," then your overall assessment of the importance of that disease might be "high" if you consider mortality to be more important than the other criteria.

  Assess the first listed disease as having a relatively high, moderate, or low importance in each region. Record your overall assessments in the row labeled "Importance" on Worksheet A. Your overall assessments may not be the same as the assessments of other participants and Course Facilitators. Therefore, you should be prepared to explain your decisions.

- Assess the overall importance of each of the other diseases in each region using the procedure above. Record each assessment in the appropriate box and row.

> If you had no difficulty with Worksheet A, go to the next page and follow the instructions in Section 2.0, "Assess Likelihood of Success." If you did have difficulty with Worksheet A or if you have any questions, consult with a Course Facilitator.

2.0 ASSESS LIKELIHOOD OF SUCCESS.

Frequently, priority decisions are made after completing only an assessment of the importance of the diseases. However, in order to design the most effective immunization programme possible, several other factors must be considered. These factors influence the likelihood of success of the immunization programme, and include government commitment, technical, management, and public response factors. Economic factors are also important; they are considered in the module titled Programme Design. The data needed to assess the factors influencing the likelihood of success are frequently sparse and unreliable. Decisions must often be based on imprecise estimates. Be sure that you can explain your decisions and that they are consistent with the best information available.

Fold out Worksheet B (page 15) and notice that the diseases preventable by immunization have again been listed for you in the first column. Use this worksheet and the following procedure to assess the likelihood of success with each listed disease. When you need data, refer to the description of Fictitia in the module titled Introduction ("Demographic Data," "Leading Causes of Morbidity and Mortality," "Public Perception of Health Problems," and "Health Care in Fictitia").

The major steps for assessing likelihood of success of an immunization programme are:

- Assess government commitment factors.
- Assess technical factors.
- Assess management factors.
- Assess public response factors.

2.1 Assess Government Commitment Factors

Each of the various levels of the government (national, regional, local) must be firmly committed to the programme in order to achieve success. A lack of commitment on their part may be due to:

- a failure to recognize the importance of the disease;
- a failure to recognize the importance of the immunization programme;
- a feeling that someone else is responsible for the immunization programme.

The level of government commitment to the proposed immunization programme can be assessed from a review of recent government policy decisions and statements, and from proposed and adopted governmental plans and budgets. A government can be considered to be highly committed to a programme if it has:

- included the programme in its budget;
- hired a programme manager; and
- written a long-term operational plan for the programme.

Examine any information on the government and assess the immunization programme for each disease as having either a relatively high, moderate, or low likelihood of success in each region. Record your assessments on Worksheet B in the rows labeled "Government Commitment."

THE REMAINDER OF THE ASSESSMENT PROCESS WILL BE LIMITED TO THOSE DISEASES IN THOSE REGIONS WHICH HAD EITHER A "HIGH" OR "MODERATE" LIKELIHOOD OF SUCCESS FROM YOUR CONSIDERATION OF GOVERNMENT COMMITMENT FACTORS. DRAW A LINE IN THE ROWS LABELED "TECHNICAL," "MANAGEMENT," AND "PUBLIC RESPONSE" FOR THOSE DISEASES IN THOSE REGIONS WHICH HAD A "LOW" LIKELIHOOD OF SUCCESS FROM YOUR CONSIDERATION OF GOVERNMENT COMMITMENT FACTORS.

2.2 Assess Technical Factors

The availability of effective vaccines and the ability to adequately store and deliver the vaccines are essential for the immunization programme to succeed. Examine any available information to answer the following questions for those diseases in those regions with "high" or "moderate" likelihood of success from your consideration of government commitment factors.

- How effective is the vaccine?
- How many doses of the vaccine must be administered?
- Is it likely that the vaccine, when administered, will cause serious side effects?
- Is the vaccine administered orally, by automatic injector, or by needle and syringe?
- Does the vaccine require refrigerators or does it require freezers?
- Is it likely that an adequate cold chain can be established?
- Are there any physical or climatic barriers which would make delivery of the vaccine to the target population difficult (for example, mountainous terrain, inadequate road systems, heavy rains, or extreme temperatures)?
- How dense is the population?

Use your answers to determine in which regions and for which diseases the immunization programme would encounter barriers to maintenance and/or delivery of the vaccine. Assess the immunization programme for each disease as having either a relatively high, moderate, or low likelihood of success in each region. Record your assessments on Worksheet B in the rows labeled "Technical."

2.3 Assess Management Factors

Good management is an essential element of a successful programme. A well-managed programme should include the following:

- a qualified programme manager;
- adequate planning;
- adequate budgeting;
- precisely written descriptions of the tasks which each staff member is expected to perform;
- adequate training for each staff member to enable him to understand and carry out all of his assigned responsibilities;
- adequate supervision;
- adequate coordination between various agencies involved in the programme;
- adequate incentives to attract and keep desirable staff;
- high morale;
- adequate reporting of costing information, immunization data, surveillance data, supplies usage data, transport data, and cold chain performance data.

Assessment of management factors can be based on past experiences with immunization programmes or with other regional or national programmes. Use any available information to assess the immunization programme for each disease as having either a relatively high, moderate, or low likelihood of success in each region. Record your assessments on Worksheet B in the rows labeled "Management."

2.4 Assess Public Response Factors

A programme may have governmental support and no technical or management problems, yet be unsuccessful because the public does not use it. Assessment of the likelihood of a good public response to a programme can be based on public response to similar efforts in the past. To assess previous public response and the likelihood of response in the future, consider the following questions:

- Does the public think the disease is important?
- Does the public think immunization is necessary to prevent cases, deaths, and/or complications of the disease?

- Is publicity likely to be effective in informing the public of how to take advantage of the programme?
- Has the public had good experiences in the past with the health system and/or immunization programmes?
- Have barriers to participation existed in the past which may still exist? For example, is transportation available? Do social customs prevent mothers from using the service?

Examine any available information to answer the questions above for each listed disease with "high" or "moderate" likelihood of success from your consideration of government commitment factors. Then use your answers to assess the relative likelihood of good public response for each disease in each region as high, moderate, or low. Enter your answers on Worksheet B in the row labeled "Public Response."

2.5 Assess Likelihood of Success

- Examine your answers recorded on Worksheet B for the first listed disease in each region. Use these assessments to establish an overall assessment of the likelihood of success of an immunization programme for this disease in each region in Fictitia.

  The way in which you make these overall assessments is again up to you. You may wish to average your answers, or you may consider a certain criterion more important than the others and therefore wish to give it more weight. However, if a disease had a "low" likelihood of success in a region from your consideration of government commitment factors, the overall likelihood of success for the disease in that region would be "low."
- In the row labeled "Success" on Worksheet B, record as high, moderate, or low your assessment of the likelihood of success of an immunization programme for the first listed disease in each region. Your assessments may not be the same as the assessments of other participants and Course Facilitators, so be prepared to explain your decisions.
- Assess the likelihood of success of an immunization programme to prevent the other diseases in each region. Record your assessments in the appropriate box and row labeled "Success."

3.0 ESTABLISH PRIORITIES.

Having assessed the diseases preventable by immunization according to their importance and to the likelihood of success in immunizing against them, the next step is to combine these judgments into a final assessment of priority. Fold out Worksheet C (page 17) and use it to record your assessments.

3.1 Transfer your assessments of overall importance from Worksheet A to the appropriate boxes in the rows labeled "Importance" on Worksheet C.

3.2 Transfer your overall assessments of the likelihood of success from Worksheet B to the appropriate boxes in the rows labeled "Success" on Worksheet C.

3.3 The final assessment of priority for each disease in each region results from combining the assessments for "Importance" and "Success." The way in which you make these overall assessments is again up to you. You may wish to average your 2 answers, or you may consider a certain criterion more important than the other and therefore wish to give it more weight. Assess the priority of the first listed disease in each region to determine if it is high, moderate, or low, and record your assessments on Worksheet C in the row labeled "Overall Priority." Because your assessments may not be the same as the assessments of other participants and Course Facilitators, be prepared to explain your decisions.

3.4 Repeat Step 3.3 for the other diseases in each region to make priority decisions among the diseases preventable by immunization. Record your answers on Worksheet C in the rows labeled "Overall Priority."

3.5 Compare all of the final assessments and determine if the relative priority of the diseases in each region seems reasonable to you. Adjust the assessments if necessary in light of any other factors (such as political preferences) which you consider to be relevant.

3.6 Place a check (✓) beside those diseases in those regions which received "high" overall priority.

CONCLUSION

This module describes a procedure for establishing regional priorities among the diseases preventable by immunization in a country. This procedure involves 3 major steps:

- Assess importance of each disease.
- Assess likelihood of success with each disease.
- Combine these assessments to establish priorities.

Knowing the priority diseases in each region of a country enables an immunization programme manager to focus programme efforts where they promise to have the greatest impact on reducing morbidity and mortality. Recognize that priorities may not always be established objectively. However, the procedure described in this module allows you to select priorities in a systematic way and to know the reasons for those decisions, even if those decisions are altered by other decision-makers. This procedure can be used to select priorities even when the data is incomplete or unreliable. Hopefully the data will improve with time and can then be used to make even more objective decisions.

After you have completed this module, let a Course Facilitator know that you are ready for a group discussion on the module.

ESTIMATED MORBIDITY AND MORTALITY DUE TO DISEASES

PREVENTABLE BY IMMUNIZATION IN FICTITIA IN 1980

Region	Incidence	Incidence Rate*	Mortality	Mortality Rate*	Case Fatality Rate* (%)	Attack Rate* (%)
			DIPHTHERIA			
Delta	1,500	150	150	15	10	3.9
Coastal	16,000	160	1,600	16	10	3.9
Highland	6,000	150	600	15	10	3.9
Mountain	1,500	150	150	15	10	3.9
TOTAL	25,000	156	2,500	15	10	3.9
			MEASLES			
Delta	36,000	3,600	936	93.6	2.6	100
Coastal	360,000	3,600	15,120	151.2	4.2	100
Highland	144,000	3,600	4,752	118.8	3.3	100
Mountain	36,000	3,600	792	79.2	2.2	100
TOTAL	576,000	3,600	21,600	135.0	3.75	100
			NEONATAL TETANUS			
Delta	940	94	799	79.9	85	2.4
Coastal	9,400	94	7,990	79.9	85	2.4
Highland	3,760	94	3,196	79.9	85	2.4
Mountain	940	94	799	79.9	85	2.4
TOTAL	15,040	94	12,784	79.9	85	2.4
			NON-NEONATAL TETANUS			
Delta	940	94	376	37.6	40	0.1
Coastal	9,400	94	3,760	37.6	40	0.1
Highland	3,760	94	1,504	37.6	40	0.1
Mountain	940	94	376	37.6	40	0.1
TOTAL	15,040	94	6,016	37.6	40	0.1

*Note: Incidence, mortality and prevalence rates are expressed per 100,000 population. Attack rates are estimates for the target population only and not for the total population.

--continued

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ESTIMATED MORBIDITY AND MORTALITY ... A

BY IMMUNIZATION IN FICTITIA ... OF THE DISEASES ... MMUNIZATION

Region	Incidence	Incidence Rate	Mortality	Mortality Rate
				PE
Delta	32,000	3,200	480	48
Coastal	320,000	3,200	4,800	48
Highland	128,000	3,200	1,920	48
Mountain	32,000	3,200	480	48
TOTAL	512,000	3,200	7,680	48
				POLI
Delta	133	13	13	1.3
Coastal	8,000	80	800	8.0
Highland	532	13	53	1.3
Mountain	133	13	13	1.3
TOTAL	8,798	55	879	5.5
				TUBER
Delta	600	60	120	12
Coastal	10,000	100	2,000	20
Highland	3,200	80	640	16
Mountain	400	40	80	8
TOTAL	14,200	89	2,840	18

REGIONS		
COASTAL	HIGHLAND	MOUNTAIN

C

IORITIES

REGIONS		
COASTAL (H)	HIGHLAND	MOUNTAIN
L H L	L M	L L L
H H (H)	H H (H)	H L ? M
H H (H)	H H (H)	H L ? M
H L H - L	H L M - L	H L M - L
H H (H)	H M (H)	H L M
H H (H)	M H (H)	H L ? L
H L L - M	L L L	L L L

d Worksheet C,
page 11.

ANNEX:

EXTRA COPIES OF WORKSHEETS

Note: The materials in this Annex may be adapted for use in determining regional priorities for the diseases preventable by immunization in your country.

WORKSHEET A

ASSESSING IMPORTANCE OF THE DISEASES

PREVENTABLE BY IMMUNIZATION

Disease	Importance Factors	REGIONS			
Diphtheria	Mortality Disability Incidence Importance				
Measles	Mortality Disability Incidence Importance				
Neonatal Tetanus	Mortality Disability Incidence Importance				
Non-neonatal Tetanus	Mortality Disability Incidence Importance				
Pertussis	Mortality Disability Incidence Importance				
Poliomyelitis	Mortality Disability Incidence Importance				
Tuberculosis	Mortality Disability Incidence Importance				

Record assessments as high, moderate, or low.

ASSESSING LIKELIHOOD OF SUCCESS

Disease	Success Factors	REGIONS			
Diphtheria	Government Commitment Technical Management Public Response				
	Success				
Measles	Government Commitment Technical Management Public Response				
	Success				
Neonatal Tetanus	Government Commitment Technical Management Public Response				
	Success				
Non-neonatal Tetanus	Government Commitment Technical Management Public Response				
	Success				
Pertussis	Government Commitment Technical Management Public Response				
	Success				
Poliomyelitis	Government Commitment Technical Management Public Response				
	Success				
Tuberculosis	Government Commitment Technical Management Public Response				
	Success				

Record assessments as high, moderate, or low.

WORKSHEET C

ESTABLISHING PRIORITIES

Disease	Factors	REGIONS			
Diphtheria	Importance Success Overall Priority				
Measles	Importance Success Overall Priority				
Neonatal Tetanus	Importance Success Overall Priority				
Non-neonatal Tetanus	Importance Success Overall Priority				
Pertussis	Importance Success Overall Priority				
Poliomyelitis	Importance Success Overall Priority				
Tuberculosis	Importance Success Overall Priority				

Record assessments as high, moderate, or low.

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